

SECTION VIII DIFFERENCE DATA

8.1 INTRODUCTION

8.2 The information presented herein identifies the differences between the HF Receiver, Type RA6790/GM (hereinafter referred to as the basic receiver) and the modified receiver, resulting from the addition of an AGC level return software modification.

8.3 EQUIPMENT MODIFICATIONS

8.4 Refer to Attachment A "Technical Modification for AGC Level Return" at the rear of this document.

8.5 SCOPE OF DIFFERENCE DATA

8.6 In-as-much as the general description, installation, circuit description and maintenance for this manual are not affected by the equipment modifications, the difference data will address only the following. This includes: operation, parts list and schematic diagrams for the microprocessor circuit card assembly (A6A2) within the microcomputer assembly (A6).

8.7 OPERATION

8.8 Operation of the modified receiver is identical to that of the basic receiver with the following exception.

8.9 AGC Level Return - Refer to paragraph 1-15 in Attachment A.

8.10 PARTS LIST

8.11 The information presented herein pertains to usable on code effectiveness associated with the modified receiver and provides a listing of replaceable electrical/electronic parts for the microprocessor circuit card assembly (A6A2) within the microcomputer assembly (A6).

8.12. PARTS LIST DESCRIPTION - The list of replaceable parts consists of a table which divides the microprocessor circuit card assembly into representative groups of sub-assemblies and components as may be applicable. This subdivision facilitates the identification and requisitioning of replacement parts for the microprocessor circuit card assembly of the modified receiver. It should be noted that the procurement of parts for any sub-assembly/components for the basic receiver, not covered by this parts list addressing the equipment modifications to the modified receiver, may be obtained by referring to Section VI of this manual.

8.13 The parts list table is arranged in a four column format. The first column provides the sub-assembly and/or part reference designation, as applicable. The second column provides a listing and description of each end item/assembly and subordinate subassemblies and/or parts with indentions to indicate subordinate relationship. The third column lists the Racal part number and the fourth column lists the true manufacturer's part number or the MS, AN, JAN, AF, MIL, or NAF part number when government standard parts are used.

8.14 **USABLE ON CODE EFFECTIVITIES** - The usable on code provides an indication of a special effectivity associated with a specific serial, series or model number. This effectivity is identified by the use of a code consisting of a capital letter of the alphabet. Special effectivities for the modified receiver are covered in the usable on coding list provided below. It should be noted that the special effectivities associated with the modified receiver are a direct result of the microprocessor circuit card assembly (A6A2) of the micro-computer assembly (A6) equipment modification.

USABLE ON CODING LIST

USABLE ON CODE

SERIAL NUMBER

A

Greater than 2000

8.15 **PARTS ORDERING** - When ordering replacement parts for the modified receiver, specify the reference designation and part number, and provide a complete component description. Specifying the name and part number of the assembly and/or subassembly may also be useful to ensure correct part identification. If a part contained in this parts list is not the same part as installed in an assembly or subassembly, the part called out in the parts list may be used or a duplicate of the actual part in the equipment may be used, either of which will provide satisfactory equipment operation.

8.16 **PARTS SUPPLIERS** - Replacement parts may be obtained from any vendor for convenience, as long as they meet the required military, industrial or equipment design specifications as applicable. However, it is recommended that replacement parts be obtained from the receiver manufacturer for best results. To order parts from the modified receiver manufacturer, address all orders to Racal Communications, Inc., 5 Research Place, Rockville, Maryland, 20850.

8.17 SCHEMATIC DIAGRAMS

8.18 The following is a reduced engineering drawing for the microprocessor circuit card assembly (A6A2).

Foldout

(Refer to Figure 7-8, Sheet 1, for circuit details)

Figure 8-1. Microprocessor Circuit Card
Assembly (A6A2) Schematic
Diagram (Sheet 1 of 2)

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Foldout

(Refer to Figure 7-8, Sheet 2 for circuit details)

Figure 8-1. Microprocessor Circuit Card
Assembly (A6A2) Schematic
Diagram (Sheet 2 of 2)

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TABLE 8-1. PARTS LIST, MICROPROCESSOR ASSEMBLY, A6A2

FIG. & INDEX NO.	REF. DESIG.	COMPONENT DESCRIPTION 1 2 3 4 5 6 7	RACAL PART NO.	MFR. PART NO.	USABLE ON CODE
	A6A2	Microprocessor Assembly	08392		
	BT1	Battery, Ni-Cad, 2.4 V dc	42517		
	C1, C2	Capacitor, Ceramic, 15 pF, nonpolarized, $\pm 5\%$	21351	DTZ-15	
	C3-C10, C18	Capacitor, Ceramic, 0.1 uF, 50 WVDC, $\pm 20\%$	21732	MS39014101-1593	
	C11, C12	Not Used			
	C13, C14	Capacitor, Tantalum, 6.8 μ F, 35 WVDC, $\pm 20\%$	25060-685	T362A685M035AS	
	C15	Capacitor, Ceramic, 0.001 μ F, 50 WVDC, $\pm 20\%$	21756	CY15C102M	
	C16	Capacitor, Tantalum, 4.7 μ F, 10 WVDC, $\pm 2\%$	25059	T210A475M010MS	
	C17	Capacitor, Tantalum, 15 μ F, 20 WVDC, $\pm 20\%$	25062-156	T362B156K020AS	
	CR1	Diode, Zener, 5.6 V dc	33543	1N752A	
	CR2, CR4, CR5, CR6	Diode, Silicon	35514	1N916B	
	CR3	Diode, Germanium	35538	1N270	
	J1	Connector, 34-Pin	61200		
	J2	Connector, 50-Pin	61224		
	Q1, Q4	Transistor, PNP, Low Power	32037	2N3906	
	Q2, Q3, Q5	Transistor, NPN, Low Power	32036	2N3904	
	Q6, Q7	Transistor, Field Effect	32518	TIS74	
	R1, R7	Resistor, Film, 1 K, $\pm 2\%$, 1/4 W	12161-102	RL07S102G	
	R2	Resistor, Film, 39 K, $\pm 2\%$, 1/4 W	12161-393	RL97S393G	
	R3, R8	Resistor, Film, 10 K, $\pm 2\%$, 1/4 W	12161-103	RL07S103G	
	R4, R12	Resistor, Film, 47 K, $\pm 2\%$, 1/4 W	12161-473	RL07S473G	
	R5	Resistor, 120 K, $\pm 2\%$, 1/4 W	12161-124	RL07S124G	
	R6	Resistor, Film, 82 K, $\pm 2\%$, 1/4 W	12161-823	RL07S823G	
	R9	Resistor, 270 ohms, $\pm 2\%$, 1/4 W	12161-271	RL07S271G	
	R10, R15	Resistor, Film, 33 K, $\pm 2\%$, 1/4 W	12161-333	RL07S333G	
	R11	Resistor, Film, 47 ohms, $\pm 2\%$, 1/4 W	12161-470	RL07S470G	
	R13	Resistor, Film, 10 ohms, $\pm 2\%$, 1/4 W	12161-100	RLR07C100GR	

TABLE 8-1. PARTS LIST, MICROPROCESSOR ASSEMBLY, A6A2 (Cont.)

FIG. & INDEX NO.	REF. DESIG.	COMPONENT DESCRIPTION							RACAL PART NO.	MFR. PART NO.	USABLE ON CODE
		1	2	3	4	5	6	7			
	R14	Resistor, Film, 10 K, +2%, 1/4 W							12161-104	RL07S104G	
	U1	IC, Central Processor Unit							36710	MK3850	
	U2	IC, System Memory Inter- face							36712	MK3853	
	U3	IC, Dual 1-of-4 Decoder							36671	M38510/30702BEE	
	U4	IC, Octal 3-State Transceiver							36741	M38510/31004BEA	
	U5, U6,	ROM Set, Firmware, RAGM01							A09666		A
	U14	IC, Random Access Memory							36713	PS101L	
	U7, U8	IC, +12 V Regulator, TO-92							36760	LM78L1ZAWC	
	U9	IC, Triple 3-Input NAND Gate							36633	M38510/30005BCE	
	U11	IC, Quad 2-Input NOR Gate							36660	MS8510/30301BCE	
	U12	IC, Hex Inverter							36676	M38510/3003BCE	
	U13	IC, Octal D Tri-State F/F							36703	SN74S374N	
	XU5, XU6, XU14	IC Socket, 24 Pin, DIP							76020		
	Y1	Crystal, 2 MHz							08487		
	-	Printed Circuit Card							08482		